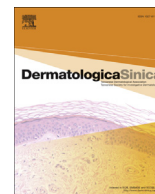


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## CASE REPORT

## Palmar purpuric lichen nitidus—clinicopathological and dermoscopic findings



Chun-Yu Cheng, Cheng-Sheng Chiu, Yu-Huei Huang\*

Department of Dermatology, Chang Gung Memorial Hospital, Taipei, Taiwan

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## ABSTRACT

Lichen nitidus (LN) is an uncommon dermatosis of unknown etiology. LN confined to the palms is an unusual presentation and only a few cases have been reported. The clinical features may mimic pompholyx, pitted keratosis, and porokeratotic eccrine ostial and dermal duct nevus. We herein report a rare case of palmar purpuric LN with characteristic dermoscopic findings.

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## Introduction

Lichen nitidus (LN) is an uncommon dermatosis of unknown etiology that was first described by Felix Pinkus in 1901.<sup>1</sup> It occurs mostly in children and young adults, but the elderly can also be affected. The clinical manifestations of LN are small, glistening, flesh-colored to pink or reddish papules, which are often located on the penis, genitalia, abdomen, and extremities. LN confined to the palms is an unusual presentation and only a few cases have been reported.<sup>2–5</sup> We herein report a rare case of palmar purpuric LN with characteristic dermoscopic findings.

## Case report

A healthy 17-year-old male presented to our clinic with multiple asymptomatic flesh-colored papules on his right palm for 5 years. On physical examination, several pinpoint-sized flesh-colored papules with central pitting and purpuric change located on his right palm were noted (Figure 1). No similar lesions were found on other areas. Dermoscopy revealed multiple pitted punctual hemorrhages (Figure 2). A skin biopsy was performed and the histopathology revealed multiple small focal parakeratosis with underlying atrophic epidermis and dilated papillary dermis filled with lymphohistiocytes (Figure 3). In addition, hyalinized capillaries in the papillary dermis with erythrocyte extravasation were also noted. The histopathological findings were suggestive of

palmar purpuric LN. The patient applied topical clobetasol propionate 0.5 mg/g twice per day for 2 months and then stopped the therapy by himself due to no significant response. He did not accept further treatment because the skin lesions were asymptomatic. The lesions were still persistent at a four-month follow-up visit.

## Discussion

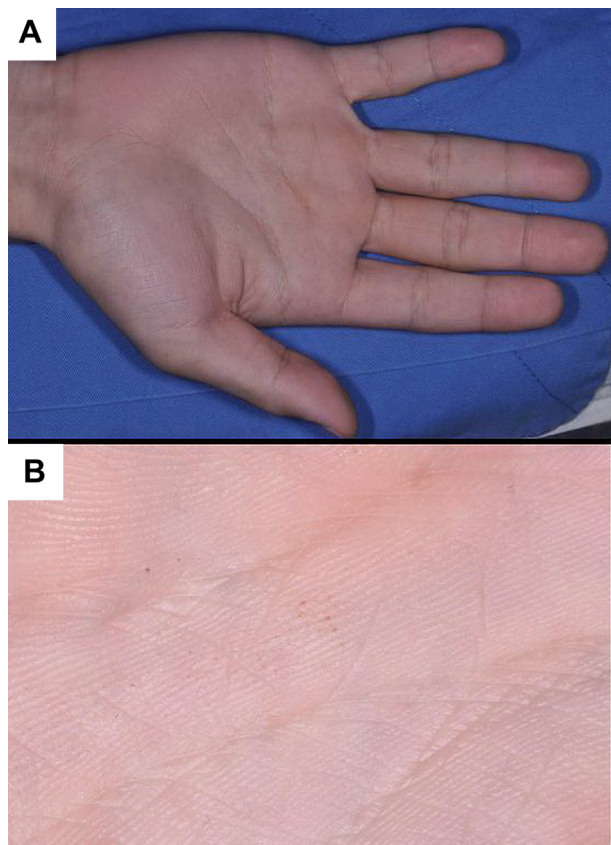
LN skin lesions are mainly localized, although a few cases of generalized LN have been reported.<sup>6</sup> Histopathological findings reveal a well-circumscribed dense infiltration of lymphohistiocytic cells and occasionally giant cells in the dermal papillae just beneath the epidermis. The thin overlying epidermis and elongation of the adjacent rete ridges form a characteristic “claw-like” pattern. Basal layer vacuolar degeneration and cytooid bodies may be a feature.

Purpuric LN is an uncommon variant of LN with the manifestation of nonblanchable reddish to brownish tiny papules mainly on the extremities.<sup>7–9</sup> Microscopic findings disclose hyalinized capillaries with sub-epidermal hemorrhages. Endo et al suggested that the erythrocyte extravasation may be attributable to the degenerative change and fragility of capillary vessels.<sup>7</sup>

Palmar involvement of LN is infrequent and most cases have also had extrapalmar lesions. LN limited to the palms is very rare, and only four cases have been reported in the English literature.<sup>2–5</sup> Of these cases, two patients had LN lesions confined to a single palm, as with the present case. The clinical presentations of palmar LN include keratotic spicules, reddish to brownish pinhead-sized papules or vesicles. The purpuric variant of palmar LN has also been described.<sup>10</sup> The lesions may mimic pompholyx, pitted keratosis, and porokeratotic eccrine ostial and dermal duct nevus. The

\* Corresponding author. Department of Dermatology, Chang Gung Memorial Hospital, 199, Tun-Hwa North Road, Taipei 105, Taiwan. Tel.: +886 2 27135211x3397; fax: +886 2 27191623.

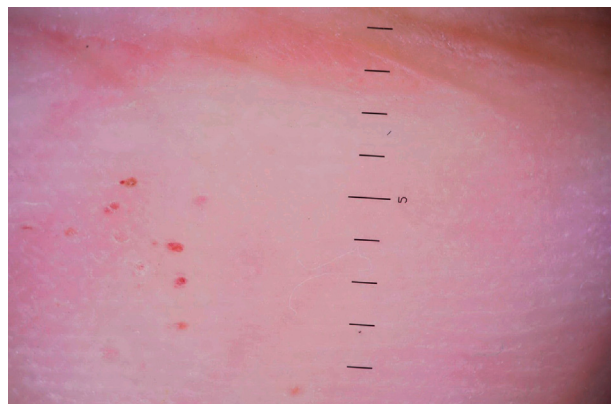
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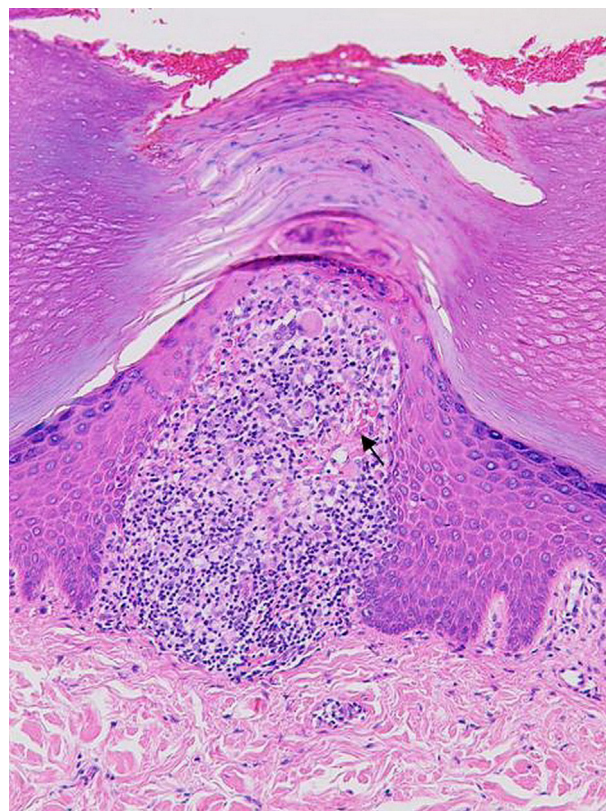
**Figure 1** (A) Multiple pinpoint-sized reddish to brownish papules located on the right palm. (B) Close-up view.

histopathological features of palmar LN are similar to the lesions on other areas. Focal parakeratosis with a surrounding thick stratum corneum corresponds to the central pitted area in clinical presentation. One case showed band-like infiltration of lymphocytes and histiocytes around the bases of rete ridges.<sup>11</sup>

The diagnosis of LN is made mainly by clinical inspection and histopathology. However, Ikenberg et al also described a case with palmar purpuric LN in which the punctual hemorrhages were found by dermoscopy.<sup>10</sup> To the best of our knowledge, this is the only case report to describe the dermoscopic findings of palmar purpuric LN.<sup>10</sup> In the present case, we found similar dermoscopic findings as with a pitted pattern. The pitted and purpuric changes



**Figure 2** Dermoscopy showed multiple punctual hemorrhages.



**Figure 3** Histopathology revealed focal parakeratosis with underlying atrophic epidermis and dilated papillary dermis filled with lymphohistiocytes and hyalinized capillary erythrocyte extravasation (arrow); hematoxylin and eosin stain, magnification 200 $\times$ .

corresponded to the focal parakeratosis with thinner epidermis and erythrocyte extravasation, respectively.

LN is often asymptomatic and self-limiting, and the skin lesions will eventually resolve spontaneously after months to years in most patients. Previous studies have reported that oral and topical steroids, phototherapy, astemizole, acitretin, and low-dose cyclosporine are effective for extensive disease.<sup>12–14</sup> In contrast to typical LN, the clinical course of palmar LN is more protracted and refractory to treatment. One case report showed complete remission after treatment with clobetasol propionate 0.5 mg/g and tacrolimus 0.1% ointment.<sup>10</sup>

In conclusion, we reported a case of purpuric LN confined to a single palm, which is a rare variant of LN. The clinical features may mimic pompholyx, pitted keratosis, and porokeratotic eccrine ostial and dermal duct nevus. We also described the correlation between dermoscopic and histopathologic findings of palmar purpuric LN.

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